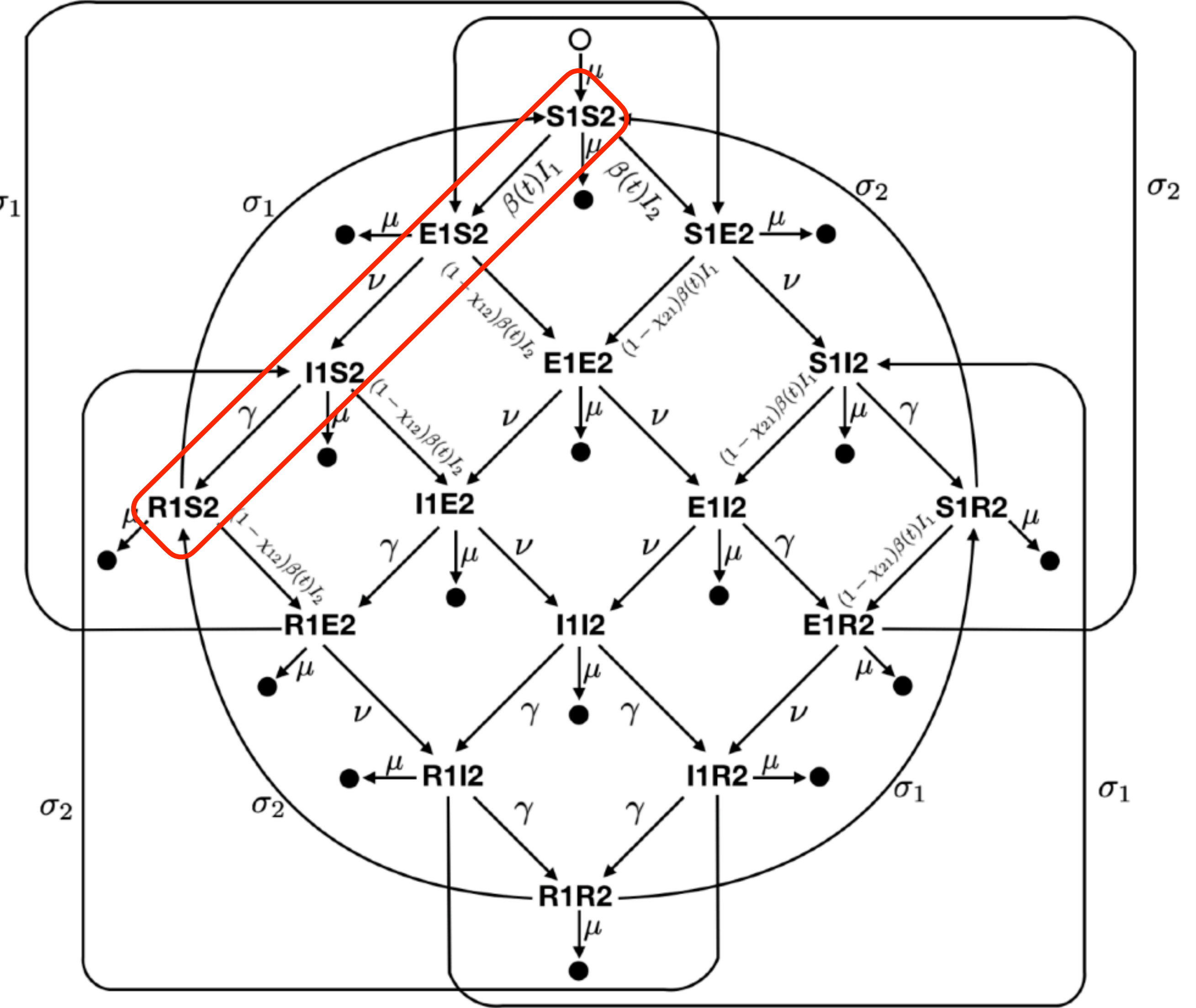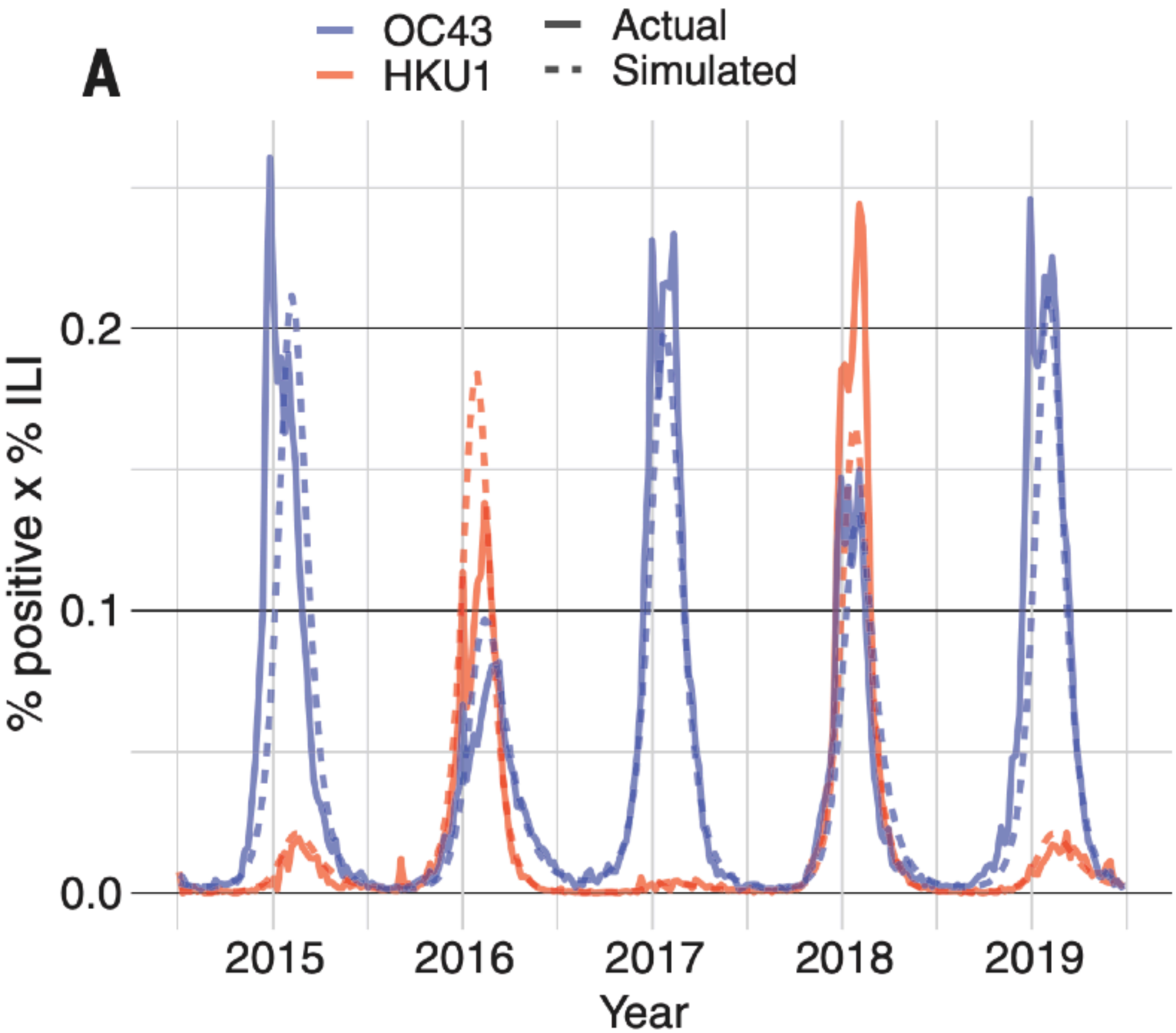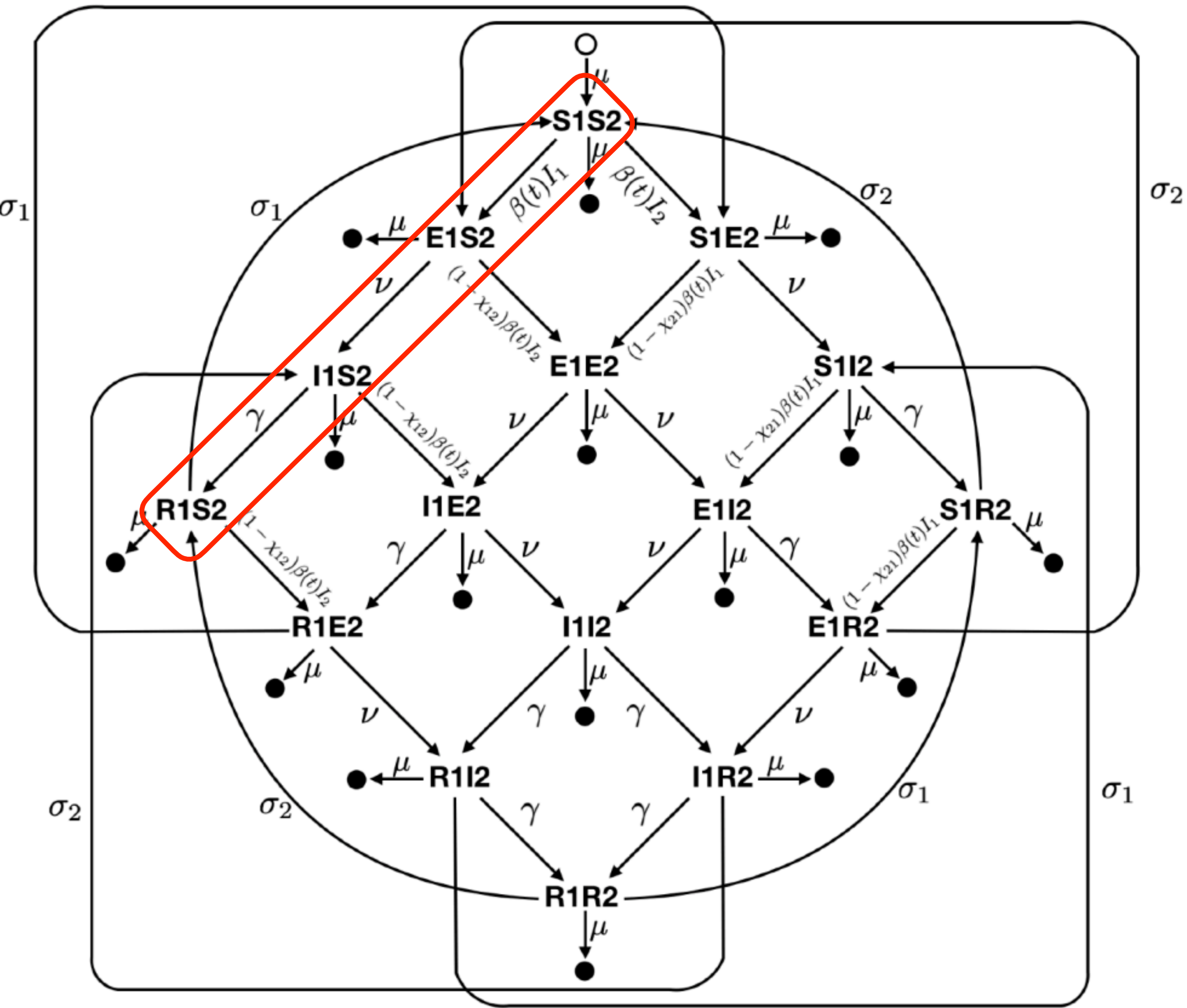# The full model

Pretty good fit to the available data:

50% cross immunity HKU1 → OC43
80% cross immunity OC43 → HKU1
R0 range 1.7 (summer) – 2.2 (winter)
45-week immunity

Model building

The full model

Incorporate yet another strain (SARS-CoV-2) with:

- $R_0 \sim 3$

- … and that's about all we knew